



# Oregon Department of Environmental Quality

Chemical Demilitarization Program

## **UMATILLA CHEMICAL AGENT DISPOSAL FACILITY**

“Engaging the Community and Achieving Results”

*Presented by:*

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2002 National RCRA Meeting

January 16, 2002



# Today's Presentation

## Chemical Demilitarization Program

- DEQ's Role and Authorities
- DEQ's Chemical Demilitarization Program
- Chemical Weapons and Stockpile Disposal Program—Background Information
- Oregon's Permitting Process for Hazardous Waste Treatment and Storage Facilities
- Engaging the Community and Responding to Concerns
- Current Project Status



# DEQ's Role and Authorities

## Chemical Demilitarization Program

- DEQ's Role (Permitting and Enforcement)
  - Hazardous Waste Treatment, Storage, and Disposal Facility Permits
  - Water Pollution Control Facility Permits
  - Air Contaminant Discharge Permits
- Authorities
  - Resource Conservation and Recovery Act (RCRA )
  - Clean Air and Clean Water Acts
  - Oregon Revised Statutes & Oregon Administrative Rules



# Chemical Demilitarization Program 1994

## Chemical Demilitarization Program

- DEQ opened a one-person field office near the proposed Umatilla facility (in Hermiston) in 1994.
- Intent was to provide a local contact for the public, media, and elected officials.
- The primary hazardous waste and air permitting staff working on the Umatilla project were based at a DEQ office located 180 miles away from the proposed facility.



# Chemical Demilitarization Program 1994-1996

## Chemical Demilitarization Program

- From 1994 through 1996 the Hermiston office provided a primary DEQ point of contact for general information about the project.
- Activities included:
  - ✿ Developing mailing lists and writing fact sheets;
  - ✿ Coordinating informational meetings and public hearings;
  - ✿ Providing briefings to local officials and private groups;
  - ✿ Assisting the “Chemical Demilitarization Citizens Advisory Commission” (appointed by the Governor); and
  - ✿ Establishing a library repository



# Chemical Demilitarization Program 1997-Present

## Chemical Demilitarization Program

- After the Umatilla Permits were issued in 1997 the Hermiston office was gradually expanded into what is now DEQ's "Chemical Demilitarization Program" (part of DEQ's Office of the Director).
- Staff now include:
  - Administrator
  - Three Environmental Engineers
  - Two Senior Hazardous Waste Specialists
  - RCRA Compliance Inspector
  - Public Information Specialist
  - Two Office Support Staff



# Stockpile Disposal Program

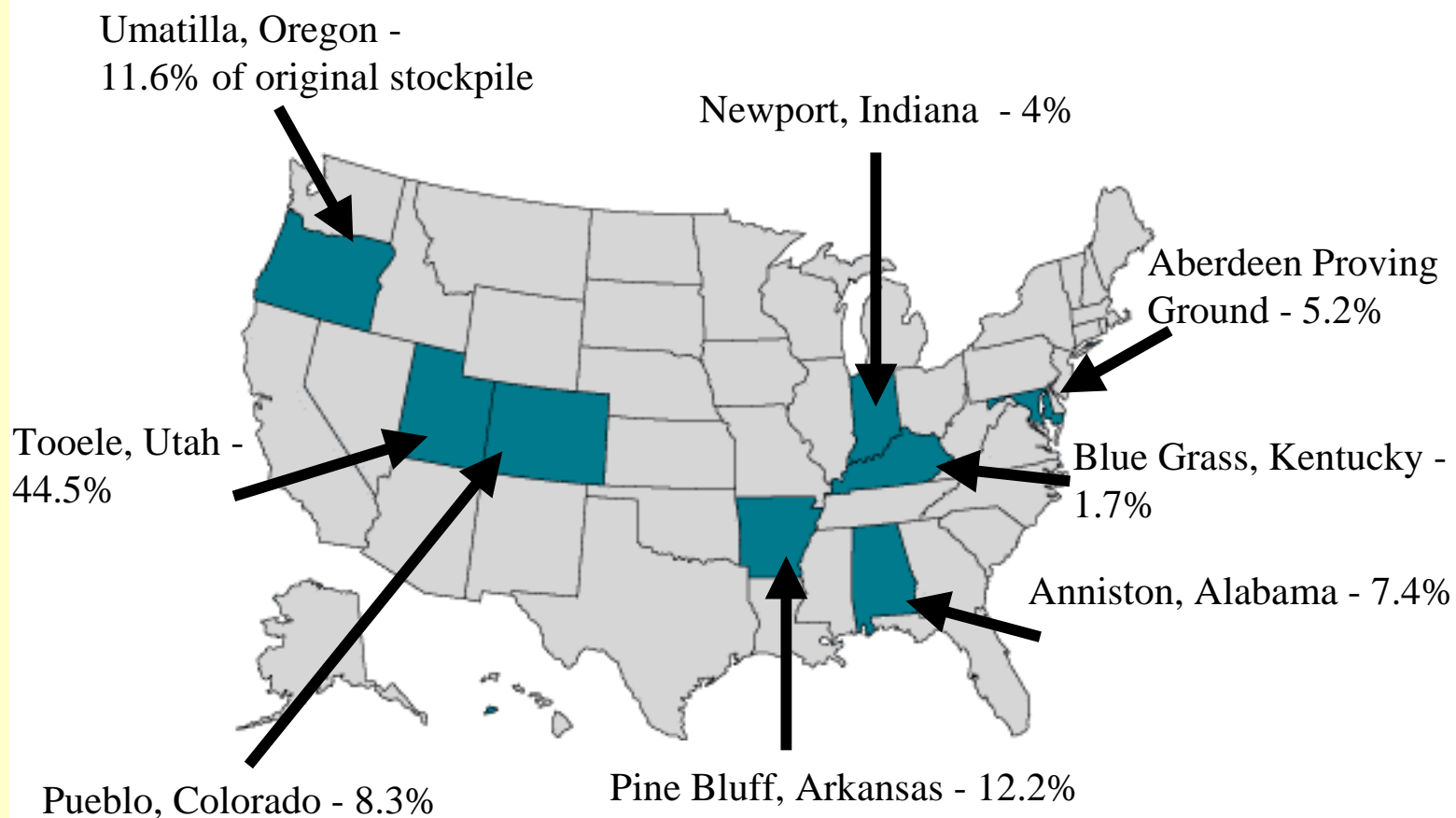
## Chemical Demilitarization Program

- In 1985 Congress mandated that the U.S. Army destroy the nation's chemical weapons stockpile.
- After conducting a “Programmatic Environmental Impact Statement,” the Army selected on-site incineration as the preferred disposal method.
- The United States Congress ratified the Chemical Weapons Convention (CWC) in April, 1997.
- The CWC had a 10-year deadline (April, 2007) for signatory nations to destroy their chemical weapons stockpiles. There are currently 144 signatory nations.



# CONUS Stockpile Sites

## Chemical Demilitarization Program

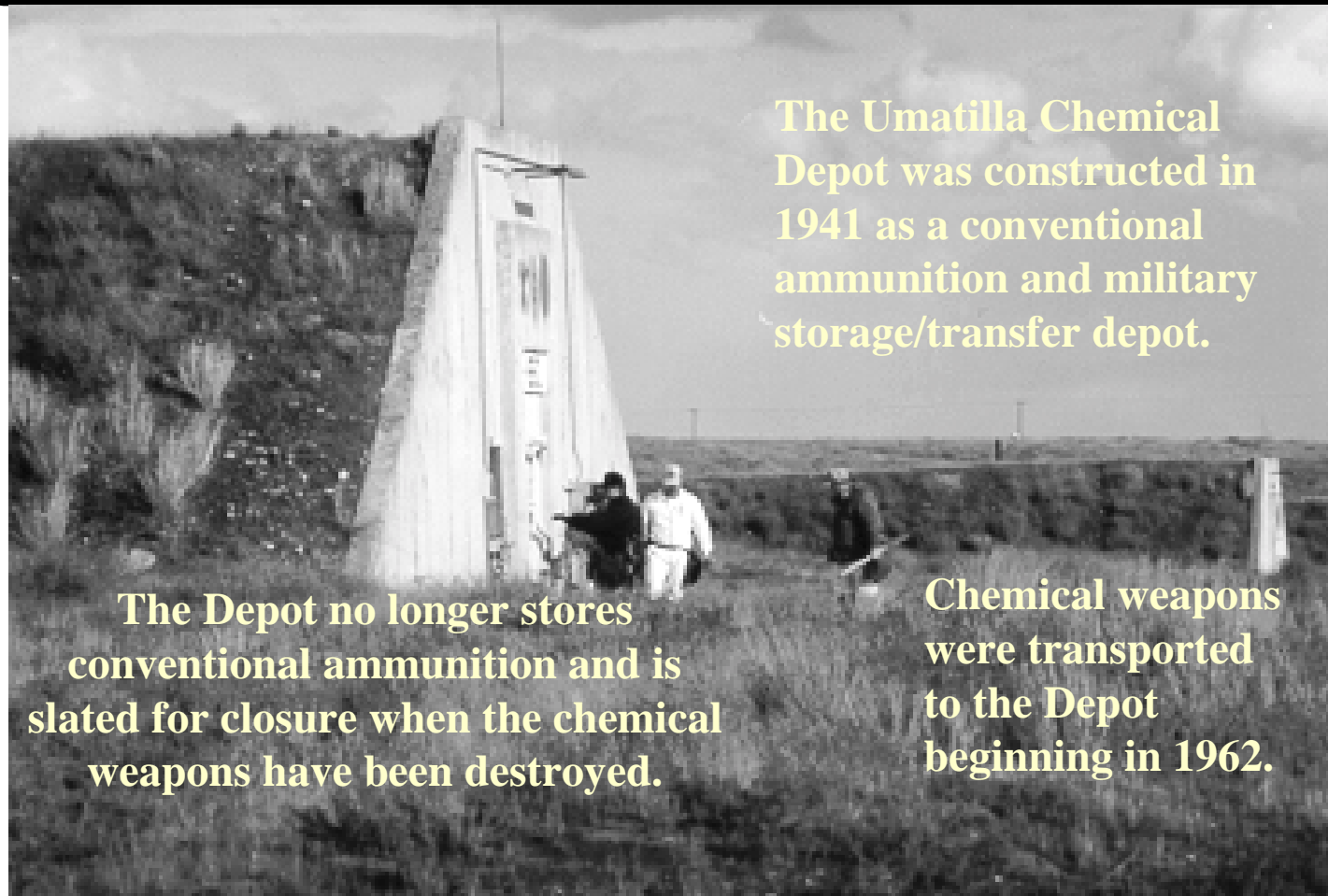






# Umatilla Chemical Depot

## Chemical Demilitarization Program



The Umatilla Chemical Depot was constructed in 1941 as a conventional ammunition and military storage/transfer depot.

The Depot no longer stores conventional ammunition and is slated for closure when the chemical weapons have been destroyed.

Chemical weapons were transported to the Depot beginning in 1962.



# Stockpile Munitions and Agents

## Chemical Demilitarization Program

- Stockpile munitions:

- Bulk containers
- Projectiles
- Rockets
- Bombs
- Landmines
- Spray Tanks



- Chemical Warfare Agents:

- Nerve Agents GB (Sarin) and VX
- Blister Agents HD, HT, (“Mustard” agents)



- Not all sites have all agents or all munition types.
- Storage configurations vary from site to site.



# Umatilla Chemical Agent Disposal Facility (UMCDDF)

## Chemical Demilitarization Program

- Hazardous Waste Storage and Treatment Facility.
- Four incinerators (of three different types) will be used to destroy the Umatilla stockpile.
- The RCRA Hazardous Waste Permit was issued in February 1997.
- Construction began in June 1997.
- “Surrogate” trial burns scheduled for June 2002.





# UMCDF

## Chemical Demilitarization Program



Site photograph taken in February 2001



# Permitting UMCDF (1986-1997 Overview)

## Chemical Demilitarization Program

- Oregon received the first RCRA Part B Application for the Umatilla Chemical Agent Disposal Facility in 1986.
- After each Notice of Deficiency from DEQ the Army submitted a revised Part B Application (1987, 1990, 1992, 1993, and 1995).
- Draft hazardous waste and air permits were opened for public comment in April 1996.
- The hazardous waste and air permits were approved by in February 1997.



# Oregon's Environmental Quality Commission (EQC)

## Chemical Demilitarization Program

- DEQ's policy and rule-making board.
- Consists of five citizens from around the state appointed by the Governor and confirmed by the Oregon Senate.
- Oregon Statutes give the EQC, not the DEQ, the authority to issue permits for hazardous waste treatment facilities.



# Statutory Requirements for Hazardous Waste Permits

## Chemical Demilitarization Program

- The Environmental Quality Commission must make certain “findings” prior to approving a permit for a hazardous waste treatment facility.
- The findings include:
  - 1) that the proposed facility uses the “best available technology”; and
  - 2) that the proposed facility will not cause adverse effects to human health or to the environment.



# The Local Community

## Chemical Demilitarization Program

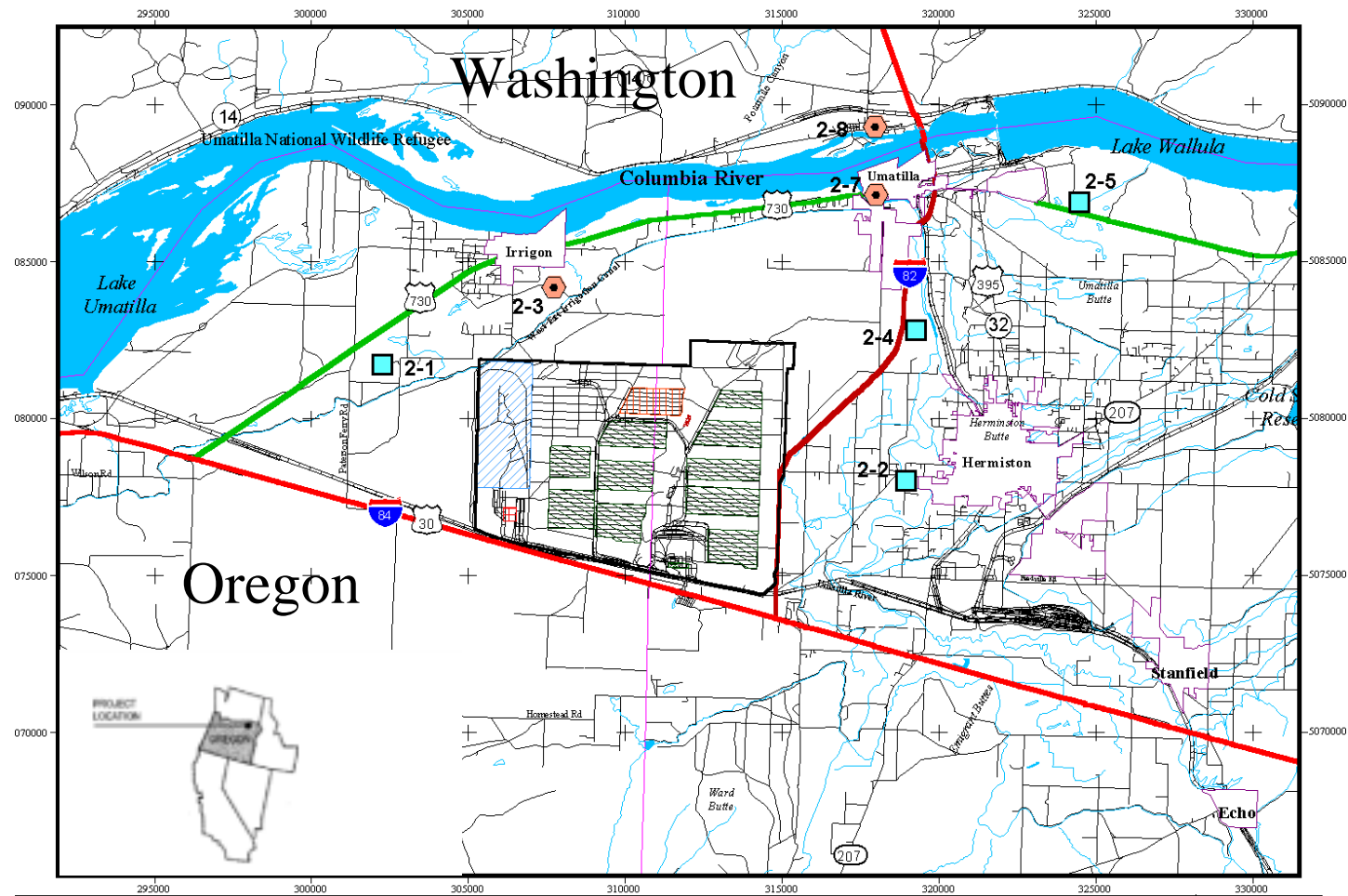
- About 140,000 people live within a 50 kilometer radius around the Umatilla Chemical Depot.
- The area is primarily rural, with an agriculture-based economy. There is a significant (>20%) Hispanic population in the cities closest to the Depot.
- The Umatilla Depot has generally been considered a “good neighbor,” but past practices at the nearby Hanford facility affect community’s perception of the trustworthiness of “government.”





# Umatilla Chemical Depot

## Chemical Demilitarization Program





# Stakeholder Groups

## Chemical Demilitarization Program

Stakeholders included:

- Various Agencies of the State of Oregon;
- Various Agencies of the State of Washington;
- Confederated Tribes of the Umatilla Indian Reservation;
- Local and national opposition groups (opposing hazardous waste incineration in general, and chemical weapons incineration specifically);
- Local and non-local citizens;
- City and County Governments;
- State and Federal Elected Officials



# The Public Process Begins

## Chemical Demilitarization Program

- Draft Hazardous Waste Permit and Air Permits were issued for public comment in April 1996.
- The public was also invited to comment on the draft Human Health and Ecological Risk Assessment, and on the “Findings” that the EQC needed to make per the Oregon Statutes.
- The initial public comment period was set for 60 days, but was extended several times.
- Ultimately, the public comment period was held open for over seven months.



# Public Information Materials: (Before the Draft Permits)

## Chemical Demilitarization Program

- Prior to issuing the draft permits the DEQ prepared four “fact sheets” (2-4 pages each):
  - Background
  - Environmental Permits
  - Public Involvement Opportunities
  - Risk Assessment Basics
- All fact sheets were provided in both English and Spanish.



# Public Information Materials: (After Issuing the Draft Permits)

## Chemical Demilitarization Program

- When the Draft Hazardous Waste and Air Permits were issued, “Chance to Comment” and regulatory fact sheets were prepared:
  - Proposed Hazardous Waste Permit (with RCRA Fact Sheet)
  - Proposed Air Quality Permit (with “Review Report”)
  - EQC Findings and the Health Risk Assessment
- All fact sheets were provided in both English and Spanish.



# The Public Speaks... And We Listen...and Listen...

## Chemical Demilitarization Program

- From April 1996 through February 1997 there were:
  - > Four Citizen Advisory Commission meetings (there had been 18 meetings held prior to the opening of the comment period);
  - > 10 meetings of the Environmental Quality Commission, including several two-day work sessions to discuss alternative treatment technologies and receive briefings and testimony from various stakeholders;
  - > Four public hearings; and
  - > Numerous public meetings and briefings to local, state, and federal elected officials and private groups.



# The Public Meetings

## Chemical Demilitarization Program

- Four public hearings, each preceded by an open house.
- All four hearings held relatively early in the extended comment period.
- Briefings and staff reports were being presented at every EQC meeting and every Citizens Advisory Commission meeting.
- Most controversial subjects became “Best Available Technology,” the perceived lack of emergency preparedness, and the danger of dioxin emissions.



# What We Heard...

## Chemical Demilitarization Program

- Concerns about:
  - Whether the facility used the “Best Available Technology” and the secondary wastes generated by the treatment of chemical weapons;
  - The continuing use of the facility after the stockpile was gone;
  - The failure of the “Chemical Stockpile Emergency Preparedness Program” (CSEPP);
  - Risk of adverse health effects, especially from dioxin emissions; and
  - The Human Health and Ecological Risk Assessment process.





# Responding to Concerns About “Best Available Technology” & Secondary Waste

## Chemical Demilitarization Program

- “Best Available Technology” was not defined in Oregon statutes, so the EQC established their own evaluation criteria for comparing alternative treatment technologies:
  - Types, quantity, and toxicity of discharges;
  - Risk of discharges from catastrophic events or breakdowns;
  - Safety of the operation;
  - Rapidity with which the technology can destroy the stockpile;
  - Impacts on consumption of natural resources;
  - The time for the technology to be tested and fully implemented; and
  - Cost



# Results of the “Best Available Technology” (BAT) Finding

## Chemical Demilitarization Program

- The EQC hired an outside contractor to conduct the BAT analysis using the EQC’s criteria to evaluate six treatment technologies.
- Many of the “emerging” technology providers could not provide much information on their particular technology’s byproducts
- Neutralization would generate huge amounts of liquids that needed further treatment.
- Ultimately, the EQC found that incineration was the Best Available Technology, mostly due to its maturity as a treatment technology.



# Responding to Concerns About Future Uses of UMCDF

## Chemical Demilitarization Program

- To preclude any future use of the facility the EQC directed the Department to add a permit condition requiring that the facility be dismantled and removed upon completion of stockpile disposal.
- The EQC also required that the Army's Contractor sign a "Financial and Performance Guarantee" obligating the Contractor to fulfill all EQC requirements in the event that the federal government did not.



# Responding to Concerns About Emergency Preparedness

## Chemical Demilitarization Program

The EQC added a condition to the permit that prohibited the commencement of operations at UMCDF until the Governor had determined “that an adequate emergency response program is in place and fully operational.”





# Responding to Concerns About Health Effects from Dioxin Emissions

## Chemical Demilitarization Program

- The EQC retained an outside contractor (from Oregon State University) to evaluate UMCDF's emissions of dioxins and furans, and the potential impact on the local populace.
- The OSU professor concluded that the dioxin emissions from UMCDF would be minimal and well within regulatory limits.
- In addition, she determined that UMCDF's design and carbon filtration system were "state of the art" for dioxin control.



# Responding to Concerns About Relying on the Health Risk Assessment

## Chemical Demilitarization Program

- The EQC wanted “on-the-ground” confirmation that UMCDF would not impact the local area, so a permit condition was added that required the Permittees to implement an environmental monitoring program.
- After the permit was issued the Department formed a CMP Workgroup, which included
  - three federal agencies,
  - eight state agencies (Oregon and Washington),
  - one Umatilla Tribe representative, and
  - one Chemical Demilitarization Citizens Advisory Commission representative.



# The “Comprehensive Monitoring Program” (CMP)

## Chemical Demilitarization Program

The CMP established three sampling zones (based on distance from UMCDF) and required chemical agent air monitoring at the Umatilla Chemical Depot fenceline.

### The CMP Workgroup:

- > Determined the number and location of sampling sites;
- > Selected the media to be sampled;
- > Established the sampling frequency; and
- > Determined the documentation and reporting requirements.





# Engaging the Community: What Worked...

## Chemical Demilitarization Program

- Opening a local field office extremely helpful.
- Providing forums for groups on all sides of the issue aided credibility.
- Reviewing the material produced by the “opposition groups” helped with anticipating questions and challenges.
- Bringing in outside expertise for particularly contentious issues (e.g., dioxin emissions) aided credibility of decision-making process.





# Engaging the Community: What Worked...

## Chemical Demilitarization Program

- Having the members of the Environmental Quality Commission at public meetings:
  - hearing direct public testimony resulted in acute awareness of local concerns.
  - The public preferred to speak directly to the people who were empowered to make the decisions.
- The Environmental Quality Commission members were willing to work very hard, and read reams of material, to educate themselves.



# Engaging the Community: What Worked...

## Chemical Demilitarization Program

- The CMP Workgroup was generally a successful, if cumbersome, approach to establishing the monitoring program (although not all stakeholders were satisfied with the outcome).
- Establishing relationships with reporters and regular meetings with editorial boards of local newspapers helped produce quality articles with a minimum amount of errors.
- Meeting regularly with elected officials also helped with understanding, and enlisting support at the state and local legislative levels when needed.



# Engaging the Community: What Worked...

Chemical Demilitarization Program

## Honesty and Following the Process



# Engaging the Community: ...What Didn't Work

## Chemical Demilitarization Program

- A new (untried) public hearing format.
- The health risk assessment (both the process and the results) was very difficult to explain.
- Outreach efforts to the Hispanic community were generally unsuccessful.
- The relationship with the Confederated Umatilla Tribes was often strained, and risk assessment issues were never resolved.



# Engaging the Community: ...What Didn't Work

## Chemical Demilitarization Program

- Technical presenters at meetings (e.g., permit writers, toxicologists) often had difficulty with avoiding jargon and acronyms--making them difficult to understand.
- DEQ staff, and the public, were frustrated that DEQ had no mechanism (and basically no power) to address the public's biggest concern: emergency response capabilities.



# Engaging the Community: ...What Didn't Work

## Chemical Demilitarization Program

- We were unable to address the request from local officials that we require the federal government to pay some sort of “impact aid” to local cities and counties impacted by the influx of workers.
- We often had to explain to the public wanting an alternative to incineration that the choice of technology was not DEQ's to make.
- Sometimes the Army was its own worst enemy when it came to dealing with the public.



# After the Permit...

## Applying the Lessons

### Chemical Demilitarization Program

- On September 15, 1999 over 35 construction workers at UMCDF became ill from an unknown substance. Five workers were hospitalized.
- The Governor appointed a state agency task force to investigate the cause of the September incident.
- On December 31, 1999 the local emergency sirens were inadvertently activated, causing a local panic and an uproar over the state of the emergency preparedness program.



# Crisis Meeting with the Public

## Chemical Demilitarization Program

- A public meeting was held in January 2000 after the siren incident—it attracted the largest crowd ever seen on the project.
- A representative from the Governor's office, the Chair of the EQC, and the Chair of the Citizens Advisory Commission were there to hear testimony from anyone who wanted to speak.





# Restoring Confidence

## Chemical Demilitarization Program

- The meeting, and the follow-up, were successful in communicating to the local community that their concerns were heard and that top levels of the government were engaged.
- The Governor took a personal interest in the emergency preparedness program and ultimately appointed an “Executive Review Panel” to assess readiness.
- CSEPP re-organized itself at the local level.



# Current Issues

## Chemical Demilitarization Program

- Start of surrogate trial burns is approaching and public and media interest is increasing.
- Three lawsuits filed by opposition groups are pending in state courts.
- Increased security concerns are making it more difficult to get information from Army.
- There is an EQC-initiated permit modification pending that will require the Army to obtain written approval for start of operations.



# Current Project Status

## Chemical Demilitarization Program

- The Chemical Weapons Convention (CWC) destruction deadline will not be met at Umatilla (or at most stockpile sites). The CWC allows for a five-year extension (to April, 2012).
- UMCDF is scheduled to begin surrogate trial burn operations in June 2002 and chemical agent trial burns in February 2003. Operations are expected to take seven years (not including treatment and disposal of secondary wastes).



# For more information...

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